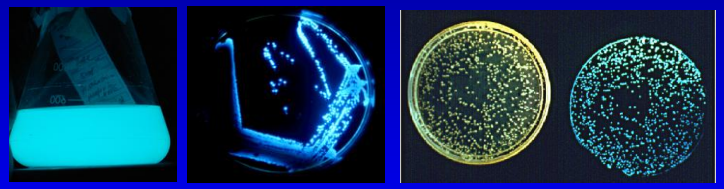
Adaptive Radiation in the Marine Bioluminescent Bacterium, *Vibrio fischeri*

Vibrio fisheri in the lab



V. fischeri is a bioluminescent bacterium that forms light organ symbioses with sepiolid squids and monocentrid fishes. These bacteria are also known to exist as part of the free-living bacterioplankton in the oceanic water column.

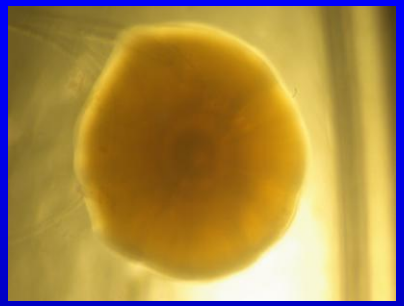
Join my research team to :

- Use microbiological approaches to study *V. fischeri*'s ability to diversify into different colony morphologies
- Use DNA sequencing and computer analysis to identify genes involved in colony morphology
- Use scanning electron microscopy to examine the structure of wrinkled colonies

Vibrio fisheri in animal light organs

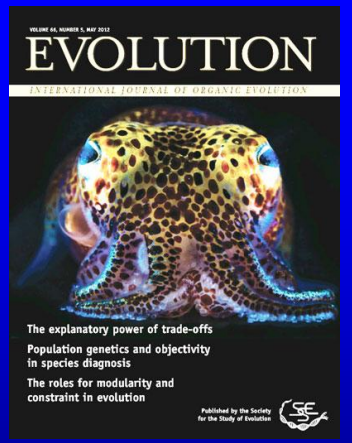
Bobtail squid & pine cone fish

Smooth Colony



Wrinkled Colony

Changes in *Vibrio* colony morphologies affect the capacity of vibrios to colonize their animal hosts. This research has medical implications, as closely related species of *Vibrio* cause disease in humans (*e.g.*, *V. cholerae*, *V. vunificus*, and *V. parahaemolyticus*). For instance, *V. cholerae* (causative agent of human cholera) vaccine development has been hampered in part by endemic strains undergoing adaptive radiation in natural salt and brackish waters.



My research featured on the cover!